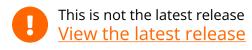


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Labour Force Status of Families methodology

Reference period June 2019

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Explanatory notes

Introduction

This publication, Labour Force Status and Other Characteristics of Families (cat. no. 6224.0.55.001), is produced from data collected in the Labour Force Survey (LFS) in June. It includes detailed family data not featured in the monthly Labour Force, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0) (cat. no. 6202.0) or Labour Force Australia, Detailed - Electronic Delivery (https://www.abs.gov.au/ausstats/abs@.nsf /mf/6291.0.55.001) (cat. no. 6291.0.55.001) publications.

Since these products are all based on data collected in the LFS, the explanatory notes of publication <u>Labour Force</u>, <u>Australia (https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia/latest-release)</u> (cat. no. 6202.0) are relevant to all three publications. Additional information is provided in <u>Labour Statistics: Concepts</u>, <u>Sources and Methods (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6102.0.55.001)</u> (cat. no. 6102.0.55.001).

Scope

Family data was collected for persons who were usual residents of private dwellings and whose family relationships could be derived. Children under 15 are included in scope, and their characteristics are used in the classification of parent-child relationships and family type.

Persons interviewed in the LFS who were classed as visitors to private dwellings, and those living in non-private dwellings (including hotels, motels, hospitals and other institutions) were excluded. After these exclusions are applied, the estimates in this publication for 2019 cover approximately 80% of the survey sample.

From October 2008, the method of producing family estimates from the LFS was improved to include the following:

- an expanded scope to include households containing permanent members of the defence forces;
- an increased range of families in the LFS sample contributing to the family estimates;
 and
- improvements to the weighting method by utilising independent population benchmarks (of persons and households), ensuring the estimates more closely reflect the Australian population.

For more information, see the <u>Information Paper: Improvements to Family Estimates from the Labour Force Survey, 2008 (https://www.abs.gov.au/ausstats/abs@.nsf/6224.0.55.002) (cat. no. 6224.0.55.002).</u>

Data interpretability

Some of the estimates contained in the tables have a relative standard error (RSE) of 50 per cent or greater. These estimates are marked as unreliable for general use. Estimates with an RSE of between 25 and 50 per cent are also marked and should be used with caution.

The data used to compile families statistics can be based on complicated family relationships and this adds complexity around interpreting the aggregated estimates. The data in these tables are as reported by any responsible adult aged 15 years and over who were usual residents of private dwellings and were selected in the LFS.

Benchmarking and estimation

The estimates are calculated in such a way as to sum to independent counts of persons and households (benchmarks). These benchmarks are updated based on Estimated Resident Population (ERP) data. Generally, revisions are made to benchmarks following the final

rebasing of population estimates to the latest five-yearly Census of Population and Housing.

For all three years in this release, estimates have been compiled using benchmarks that have been rebased to the results of the 2016 Census. These benchmarks have been revised to include the ERP data as at June 2019. For more details on population benchmarks, see the Explanatory Notes in <u>Labour Force</u>, <u>Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0) (cat. no. 6202.0)</u>.

Comparability with previous estimates

Care should be taken when comparing the latest estimates from this issue of the publication against earlier estimates published in previous issues. Estimates from previous issues have not been recompiled using the latest population and household benchmarks.

Products and services

A number of spreadsheets are available from the Data downloads section of this publication. They present tables of estimates and their corresponding relative standard errors (RSEs).

For users who wish to undertake more detailed analysis, the underlying microdata is available in ABS TableBuilder. For more details, refer to Microdata, Labour Force Status and Other Characteristics of Families, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf /Lookup/6224.0.00.001Main+Features12009,+2014+and+2019) (cat. no. 6224.0.00.001). For more information see also About TableBuilder (https://www.abs.gov.au/websitedbs /D3310114.nsf/home/About+TableBuilder).

Special tabulations are available on request. Subject to confidentiality and sampling variability constraints, tabulations can be produced from the survey incorporating data items, populations and geographic area selections to meet individual requirements. These will be provided in electronic form. All enquiries should be made to the National Information and Referral Service on 1300 135 070.

Acknowledgement

ABS surveys draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the Census and Statistics Act, 1905.

Related publications

ABS publications which may be of interest include:

- <u>Microdata, Labour Force Status and Other Characteristics of Families, Australia</u> (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6224.0.00.001) (cat. no. 6224.0.00.001)
- <u>Labour Force, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0)</u> (cat. no. 6202.0)
- <u>Labour Force Australia, Detailed Electronic Delivery (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6291.0.55.001)</u> (cat. no. 6291.0.55.001
- <u>Labour Statistics: Concepts, Sources and Methods (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6102.0.55.001)</u> (cat. no. 6102.0.55.001)
- <u>Labour Force Survey Standard Products and Data Item Guide (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6103.0) (cat. no. 6103.0)</u>

Technical note - data quality

Reliability of the estimates

1 Since the estimates in this publication are based on information obtained from occupants of a sample of households, they are subject to sampling variability. That is, they may differ from those estimates that would have been produced if all households had been included in the survey or a different sample was selected.

Non-sampling error

2 Non-sampling error may occur in any collection, whether it is based on a sample or a full count such as a census. Sources of non-sampling error include non-response, errors in reporting by respondents or recording of answers by interviewers and errors in coding and processing data. Every effort is made to reduce non-sampling error by careful design and testing of questionnaires, training and supervision of interviewers, and extensive editing and quality control procedures at all stages of data processing

Sampling error

3 Sampling error is the difference between the published estimates, derived from a sample of persons, and the value that would have been produced if the total population (as defined by the scope of the survey) had been included in the survey. One measure of the sampling error is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of persons was included. There are about two chances in three (67%) that a sample estimate will differ by less than one SE from the number that would have been obtained if all households had been surveyed, and about 19 chances in 20 (95%) that the difference will be less than two SEs.

4 Another measure of the likely difference is the relative standard error (RSE), which is

obtained by expressing the SE as a percentage of the estimate.

$$RSE\% = (rac{SE}{estimate}) imes 100$$

5 RSEs for Labour Force Status and Other Characteristics of Families estimates have been calculated using the Jackknife method of variance estimation. This involves the calculation of 30 'replicate' estimates based on 30 different subsamples of the obtained sample. The variability of estimates obtained from these subsamples is used to estimate the sample variability surrounding the main estimate.

6 The Excel spreadsheets in the Data downloads section contain all the tables produced for this release and the calculated RSEs for each of the estimates.

7 Only estimates (numbers or percentages) with RSEs less than 25% are considered sufficiently reliable for most analytical purposes. However, estimates with larger RSEs have been included. Estimates with an RSE in the range 25% to 50% should be used with caution while estimates with RSEs greater than 50% are considered too unreliable for general use. All cells in the Excel spreadsheets with RSEs greater than 25% contain a comment indicating the size of the RSE. These cells can be identified by a red indicator in the corner of the cell. The comment appears when the mouse pointer hovers over the cell.

8 Another measure is the Margin of Error (MOE), which shows the largest possible difference that could be between the estimate due to sampling error and what would have been produced had all persons been included in the survey with a given level of confidence. It is useful for understanding and comparing the accuracy of proportion estimates.

9 Where provided, MOEs for estimates are calculated at the 95% confidence level. At this level, there are 19 chances in 20 that the estimate will differ from the population value by less than the provided MOE. The 95% MOE is obtained by multiplying the SE by 1.96.

$$MOE = SE \times 1.96$$

Calculation of standard error

10 Standard errors can be calculated using the estimates (counts or percentages) and the corresponding RSEs. See What is a Standard Error and Relative Standard Error, Reliability of estimates for Labour Force data (https://www.abs.gov.au/websitedbs/d3310114.nsf /Home/What+is+a+Standard+Error+and+Relative+Standard+Error,+Reliability+of+estimates +for+Labour+Force+data) for more details.

Proportions and percentages

11 Proportions and percentages formed from the ratio of two estimates are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and the denominator. A formula to approximate the RSE of a proportion is given below. This formula is only valid when x is a subset of y:

$$RSE(\frac{x}{y}) pprox \sqrt{\left[RSE(x)
ight]^2 - \left[RSE(y)
ight]^2}$$

Differences

12 The difference between two survey estimates (counts or percentages) can also be calculated from published estimates. Such an estimate is also subject to sampling error. The sampling error of the difference between two estimates depends on their SEs and the relationship (correlation) between them. An approximate SE of the difference between two estimates (x-y) may be calculated by the following formula:

$$SE(x-y)pprox \sqrt{\left[SE(x)
ight]^2+\left[SE(y)
ight]^2}$$

13 While this formula will only be exact for differences between separate and uncorrelated characteristics or sub populations, it provides a good approximation for the differences likely to be of interest in this publication.

Significance testing

14 A statistical significance test for a comparison between estimates can be performed to determine whether it is likely that there is a difference between the corresponding population characteristics. The SE of the difference between two corresponding estimates (x and y) can be calculated using the formula shown above in the Differences section. This SE is then used to calculate the following test statistic:

$$\left(\frac{x-y}{SE(x-y)}\right)$$

15 If the value of this test statistic is greater than 1.96 then there is evidence, with a 95% level of confidence, of a statistically significant difference in the two populations with respect to that characteristic. Otherwise, it cannot be stated with confidence that there is a real difference between the populations with respect to that characteristic.

Glossary

This publication, Labour Force Status and Other Characteristics of Families (cat. no. 6224.0.55.001) is produced from data collected in the June Labour Force Survey (LFS) for a particular year. It includes detailed family data not featured in the monthly <u>Labour Force</u>, <u>Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0)</u> (cat. no. 6202.0) or <u>Labour Force</u>, <u>Australia, Detailed - Electronic Delivery (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6291.0.55.001)</u> (cat. no. 6291.0.55.001) publications.

Since these products are all based on data collected in the LFS, the Glossary of publication Labour Force, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0) (cat. no. 6202.0) and information is provided in Labour Statistics: Concepts, Sources and Methods (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6102.0.55.001) (cat. no. 6102.0.55.001), may be of assistance. Further information is also available in the ABS Family, Household and Income Unit Variables (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1286.0) Standard (cat. no. 1286.0)

The following glossary items are provided as they relate specifically to family characteristics.

Show all

Child

A person of any age who is a natural, adopted, step, or foster son or daughter of a couple or lone parent, usually resident in the same household.

All children under 15 years who usually reside in a household must form a parent-child relationship with at least one other member of the household. In households where there is no reported parent or guardian, the child is classified as having a parent-child relationship with the next most appropriate adult. This can include parent-child relationships with other relatives (such as aunts, uncles or grandparents) or with unrelated individuals (a nominal guardian).

In order to be classified as a child, the person can have no partner or child of his or her own usually resident in the household.

There are three types of child identified in the 'Relationship in household' classification:

- Child under 15 years
- Dependent student
- Non-dependent child

The differentiation of children into these three types is based upon the dependency

criterion and is designed to identify families with different structures and needs.

Dependency as used in these standards refers to economic dependency and is applied only to the population of people who could be described as 'children'. It is thus not intended to measure an aged or disabled person's dependency.

See Dependant, Dependent Student and Non-dependent Child.

Couple relationship

A couple relationship is defined as two people usually residing in the same household who share a social, economic and emotional bond usually associated with marriage and who consider their relationship to be a marriage or marriage-like union. This relationship is identified by the presence of a registered marriage or de facto marriage.

In practice, a de facto marriage exists between couples when their relationship to each other is reported as partner, lover, boyfriend, girlfriend, or as a common law (or de facto) husband, wife or spouse.

A 'couple relationship' includes same-sex couples.

Dependant

A dependant is a family member who is either:

- under 15 years of age;
- aged 15–19 years and attending school or aged 15–24 years and attending a tertiary education institution full time (i.e. dependent students).

In order to be classified as a dependant, the person must have no partner or child of his/her own usually resident in the household. A separate family in the household is formed in this instance.

Dependent student

A full time student aged 15-24 years, living in the same usual residence as his or her natural, step, foster or adoptive parent.

Family

Two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering, and who are usually resident in the same household. The basis of a family is formed by identifying the presence of a couple relationship, lone parent-child relationship or other blood relationship. Some

households will therefore contain more than one family.

Consider, for example, if two elderly brothers are living with the family of the daughter of one of the brothers. The daughter's family forms the basic family of the household and the two brothers are both allocated to this family unit as related individuals. The two brothers do not form a separate family in their own right in addition to the daughter's family, because they are related to a couple family or one-parent family already present in the household. However, if the two brothers were living in a dwelling with a family to whom they were not related, they would then form a family in their own right and be classified as an 'other family'.

See Other Families.

Family composition

The categories for family composition are:

- Couple family
 - Couple family with dependants
 - Couple family with children under 15 years
 - Couple family without children under 15 years, but with dependent students
 - Couple family without dependants
 - Couple family without dependants, but with children 15 years or older (ie non-dependent child)
 - Couple family without children
- One parent family
 - One parent family with dependants
 - One parent family with children under 15 years
 - One parent family without children under 15 years, but with dependent students
 - One parent family without dependants, but with children 15 years or older (ie non-dependent child)
- Other families

Father

A male parent with dependants and/or children. The relationship between a father and a child/dependant can be formed via a natural, adoptive, step, foster or child dependency relationship.

Hours worked

The number of hours actually worked during the reference week.

Household

One or more persons usually resident in the same private dwelling.

Husband/partner

A person in a couple relationship with another person usually resident in the same household. The couple relationship may be in either a registered or de facto marriage and includes same-sex couples. In an opposite sex couple, this is the male partner (ie husband). In a same-sex couple, it is the eldest partner (and can be female or male).

Jobless family

A jobless family is a family where no persons in the family aged 15 years or over are employed. This includes dependants and non-dependent children.

In a jobless family, all of the family members are either unemployed and/or not in the labour force.

Families that have no employed members but do have members that are classified as undetermined in the scope of the labour force survey, such as members of the permanent Australian defence force, are not included in the number of jobless families.

Lone parent family

See One Parent family.

Long-term job seekers

Refers to unemployed persons who have been actively seeking work for one year or more.

Mother

A female parent with dependants and/or children, or non-dependent children. The relationship between a mother and a child/dependant can be formed via a natural, adoptive, step, foster or child dependency relationship.

Non-dependent child

Non-dependent children are defined as children over the age of 15 years who are not studying full-time.

In order to be classified as a child, the person must have no partner or child of his/her own usually resident in the household. A separate family in the household is formed in this

instance.

The types of parent-child relationships which can be formed are via a natural, adoptive, step, or foster relationship.

Dependency, as used in these classifications, refers to economic dependency and is only applied to the part of the population that can be described as 'children'.

The dependency criterion is based on the barriers to full time employment: age and student status. Essentially, once a child turns 15 years and becomes eligible to be included in the labour force, they lose their dependency status unless they are attending school or a tertiary educational institution full-time, are aged 15 to 24 years old and live in the same household as their parents/ guardian.

See Child.

Non-private dwelling

An establishment which provides a communal type of accommodation, such as a hotel, motel, hospital or other institution. Family data is not collected from non-private dwellings.

Not determined

Where a person has an unknown labour force status, or was a permanent member of the Australian defence force (out of scope for labour force survey).

One parent family

A family consisting of one parent with at least one dependant or non-dependent child (regardless of age) who is also usually resident in the family. This family type may or may not include other related individuals.

Opposite-sex couple

Two persons of the opposite sex who are in a couple relationship and are usually resident in the same household.

Other families

A family of related individuals residing in the same household. These individuals do not form a couple or parent-child relationship with any other person in the household and are not relateded to any couple or one parent family in the household (if present).

If two brothers, for example, are living together and neither is a partner, a lone parent or a

child to anyone else in the household, and neither is related to any person in the household who are in a couple or one-parent family (if present), then they are classified as an other family. However, if the two brothers share the household with the daughter of one of the brothers and her husband, then both brothers are included in the couple family and classified as other related individuals.

Private dwelling

A residential structure which is self-contained, owned or rented by the occupants, and intended solely for residential use. A private dwelling may be a flat, part of a house, or even a room, but can also be a house attached to, or rooms above shops or offices. Family data is only collected from private dwellings.

Relationship in household

The relationship of each person residing in the same household. This is typically in relation to the family reference person (previously referred to as the "head" of the family). The family reference person is typically a parent of children in the household or a husband/partner in a family formed around a couple relationship.

Same-sex couple

Two persons of the same sex who are in a couple relationship and are usually resident in the same household.

Short-term job seekers

Refers to unemployed persons who have been actively seeking work for less than 12 months.

Social marital status

Social marital status is the relationship status of an individual with reference to another person who is usually resident in the household. A marriage exists when two people live together as husband and wife, or partners, regardless of whether the marriage is formalised through registration. Individuals are, therefore, regarded as married if they are in a de facto marriage, or if they are living with the person to whom they are registered as married.

Tertiary education institution

A Technical and Further Education (TAFE) college, university, or other educational institution, excluding primary schools and secondary schools (i.e. High School).

Usual resident

A person who usually lives in that particular dwelling and regards it as their own or main

home.

Wife/partner

A person in a couple relationship with another person usually resident in the same household. The couple relationship may be in either a registered or de facto marriage and includes same-sex couples. In an opposite sex couple, this is the female partner (ie wife). In a same-sex couple, it is the youngest partner (and can be male or female).

Quality declaration - summary

Institutional environment

For information on the institutional environment of the Australian Bureau of Statistics (ABS), including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see <u>ABS Institutional Environment</u> (https://www.abs.gov.au/websitedbs/d3310114.nsf/4a256353001af3ed4b2562bb00121564 /10ca14cb967e5b83ca2573ae00197b65!OpenDocument).

Relevance

This collection presents information about the labour force status and other characteristics of families. The information is based on data collected in the national monthly Labour Force Survey (LFS).

Timeliness

The Labour Force Status and Other Characteristics of Families is based on data collected from the Labour Force Survey held in June each year.

Accuracy

The Labour Force Survey is based on a sample of private dwellings (approximately 26,000 houses, flats etc) and non-private dwellings, such as hotels and motels. The sample covers about 0.32% of the Australian civilian population aged 15 years or over. The Labour Force Survey is designed primarily to provide estimates of key labour force statistics for the whole of Australia and, secondarily, for each state and territory.

Annual family estimates are produced from the data collected in the June Labour Force

Survey, but do not include people interviewed in non-private dwellings and those who were visitors to private dwellings. Those included in the estimates covered 80% of the survey sample for 2019.

Two types of error are possible in an estimate based on a sample survey: non-sampling error and sampling error.

Non-sampling error arises from inaccuracies in collecting, recording and processing the data. Every effort is made to minimise reporting error by the careful design of questionnaires, intensive training and supervision of interviewers, and efficient data processing procedures. Non-sampling error also arises because information cannot be obtained from all persons selected in the survey.

Sampling error occurs because a sample, rather than the entire population, is surveyed. One measure of the likely difference resulting from not including all dwellings in the survey is given by the standard error. There are about two chances in three (66%) that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included in the survey, and about 19 chances in 20 (95%) that the difference will be less than two standard errors.

Standard errors are discussed further in Technical Note - Data Quality. The standard error of annual family estimates may be calculated by using the spreadsheet contained in <u>Labour Force Survey Standard Errors</u>, <u>Data Cube</u>, <u>Feb 2014 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6298.0.55.001)</u> (cat. no. 6298.0.55.001).

Coherence

The ABS has been producing the Labour Force Status and Other Characteristics of Families since November 1974.

From October 2008, the method of producing family estimates from the Labour Force Survey was improved to include the following:

- an expanded scope to include households containing permanent members of the Australian defence forces that are usually excluded from labour force estimates;
- an increased range of families in the LFS sample contributing to the family estimates; and
- improvements to the weighting method by utilising independent population benchmarks (of persons and households), ensuring the estimates more closely reflect the Australian population.

The estimates are calculated in such a way as to sum to independent counts of persons and households (benchmarks). These benchmarks are updated based on Estimated Resident Population (ERP) data. Generally, revisions are made to benchmarks following the final rebasing of population estimates to the latest five-yearly Census of Population and Housing.

For all three years in this release, estimates have been compiled using benchmarks that have been rebased to the results of the 2016 Census. These benchmarks have been revised to include the ERP data as at June 2019. For more details on population benchmarks, see the Explanatory Notes in <u>Labour Force</u>, <u>Australia (https://www.abs.gov.au/ausstats/abs@.nsf/f6202.0)</u> (cat. no. 6202.0).

Interpretability

The Labour Force Status and Other Characteristics of Families release contains a summary of findings to aid interpretation of the results. Explanatory notes, a technical note, a glossary are also included to further aid in the interpretation. Details of the methodology and concepts used are also provided in a separate <u>Information Paper: Improvements to Family Estimates from the Labour Force Survey (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6224.0.55.002)</u> (cat. no. 6224.0.55.002).

Data access

A number of spreadsheets are available from the Data downloads section of this publication. They present tables of estimates and their corresponding relative standard errors (RSEs).

For users who wish to undertake more detailed analysis, the underlying microdata is available in ABS TableBuilder. For more details, refer to Microdata, Labour Force Status and Other Characteristics of Families, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf /allprimarymainfeatures/50FDEC21AE11360CCA2581E900107C74?opendocument) (cat. no. 6224.0.00.001). For more information see also https://www.abs.gov.au/websitedbs/D3310114.nsf/home/About+TableBuilder).

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or via email to client.services@abs.gov.au. (Mailto:client.services@abs.gov.au)